

REMARKS

Applicant acknowledges, with appreciation, the indication that claims 7, 8, 15 and 16 contain allowable subject matter. Claims 1-16 are pending, with claims 1 and 9 being the independent claims. Claims 1-16 have been amended. The amendments to the claims are to correct minor claim wording, and are cosmetic in nature. No new matter has been added. Reconsideration of the application, as amended, is respectfully requested.

In the Office Action mailed January 10, 2006, the Examiner required applicant under 37 C.F.R. 35 U.S.C. §119(b) to file a certified copy of the PCT/EP99/06951 application. Applicants note that the present application is a U.S. national stage application of international stage PCT application No. PCT/EP99/06951, a published pamphlet version of which was included in the filing papers of this national stage application as WO 01/22620. In accordance with, PCT Rule 17, it is not necessary to file a certified copy of the PCT application. Applicant has submitted herewith an application data sheet that indicates the present application is a national stage application under 35 USC 371. Withdrawal of the requirement is in order.

In the Offfce Action dated January 10, 2006, independent claims 1 and 9 were rejected under 35 U.S.C. 102(b) as anticipated by WO 98/15150 ("Bodin"). Independent claims 1 and 9, and dependent claims 5-6 and 10-14 were rejected U.S. Patent No. 5,394,158 ("Chia"). For the following reasons, it is respectfully submitted that all claims of the present application are patentable over the cited references.

The invention relates to a method and device for rapidly detecting propagation delay between a mobile station and a new base station during a handover of the mobile station from an old base station to the new base station. In accordance with the claimed invention, a search for determining a correct propagation value is performed (see pg. 5, lines 4-6 of the specification). This search strategy uses a start propagation value, which is determined based on a source radio network region of the mobile network device (see pg. 8-19 of the specification). That is, a radio network region (e.g. a cell) from which the mobile network device performs a handover to the new radio network region. Based on this radio network region, a start value of the propagation delay is determined. In accordance with the claimed invention, suitable start values for neighboring cells are pre-stored, and are used to generate a start value for the search to locate the correct propagation delay. As a result, the correct propagation delay can be determined rapidly.

The Office Action (pg. 2-3) states:

Bodin discloses a method for performing synchronization (synchronization, page 6 lines 29-31) of a mobile network device to a network control device of a present radio network region, comprising the steps of

detecting a source radio network region from which a handover (handover, page 7 lines 4-12) of said mobile network device to said present radio network region has been performed,

determining a start propagation delay (propagation delay, page 7 lines 10-20) value based on said detected source radio network region of said mobile station, and

searching (measures, page 6 lines 29-31) an actual propagation delay value by using a search strategy based on said determined start propagation delay value

However, *Bodin* fails to teach the claimed invention recited in amended independent claim 1. *Bodin* relates to a method for determining the location of a mobile station. *Bodin* (pg. 5, lines 15-18) teaches that the mobile station (MS) is ordered to perform a handover to a new base station, and that the MS sends access signals to the new base station. *Bodin* (pg. 5, lines 22-27) states, “distinct from normal behavior, all [signaling] from the new base station to the mobile station is inhibited”. *Bodin* (pg. 5, lines 22-27) states, “the [MS] then re-establishes the connection with the old base station”. Thus, *Bodin* teaches that a handover of the MS to different base stations is initiated, but not completed and that the MS maintains its connection to the original base station.

Bodin (pg. 5, lines 27-30) teaches that time delay measurements of other base stations are utilized during the uncompleted handover to determine the position of the mobile station. That is, a handover is not fully completed. Hence, *Bodin* is directed to solving a problem that is different than the problem solved by the present claimed invention. In *Bodin*, there is no need to synchronize the mobile station to the new base station because the MS is still connected to the old base station. Thus, *Bodin* fails to teach the claimed determining step and searching step pursuant to synchronizing a mobile network device to a network control device, as recited in amended independent claim 1. In view of the foregoing, independent claim 1 is patentable over *Bodin*. Therefore, reconsideration and withdrawal of the rejection under 35 U.S.C. §102(e) are in order, and a notice to that effect is earnestly solicited.

The Office Action (pg. 3-4) states:

Chia discloses a method for performing synchronization (synchronization, col. 6 lines 50-64) of a mobile network

device to a network control device of a present radio network region, comprising the steps of

detecting a source radio network region from which a handover (handover, col. 5 line 35 - col. 6 line 8) of said mobile network device to said present radio network region has been performed,

determining a start propagation delay (propagation delay, col. 5 lines 23-30) value based on said detected source radio network region of said mobile station, and

searching an actual propagation delay value by using a search strategy (test, col. 5 lines 23-30) based on said determined start propagation delay value.

However, *Chia* fails to teach the claimed invention recited in independent claim 1. *Chia* relates to a location determination system for a mobile radio network that can, with the aid of stored information on signal characteristics and an estimated distance, determine the location of a mobile unit within a microcell (see col. 2, lines 56-62). *Chia* (col. 6, lines 50-64) teaches that synchronization is performed. However, the synchronization performed here is between a microcell base station and a macrocell base station. That is, *Chia* fails to teach synchronization of a mobile network device to a network control device, as recited in amended independent claim 1.

Chia (col. 5, lines 23-30) teaches a propagation delay test is performed by monitoring the timing advance required to allow for propagation delay. *Chia* teaches that this propagation delay is measured to determine the location of a mobile station, i.e., the distance to a base station.

Chia (col. 5, lines 23-25) teaches that the base station performs a propagation delay test by monitoring the timing advance. Thus, *Chia* teaches that the synchronization has already been completed. As a result, *Chia* is directed to a problem which is completely different to that of the present application. The claimed invention is directed to performing steps associated with “determining a start propagation delay value . . . and searching an actual propagation delay value . . . based on [the] determined start propagation delay value” to synchronize a mobile network device to a network control device, as recited in amended independent claim 1. *Chia* fails to teach these claimed steps.

Moreover, *Chia* (col. 5, lines 31-45) teaches that order pairs of signal strength and timing advance are stored in the base station. That is, the actual propagation delay is determined based on previously stored fixed values for the timing advance. In contrast thereto, in the present claimed invention, the timing advance values with respect to the new base station are not yet

known. Rather, the claimed invention requires detection of these values along with the propagation value. *Chia* fails to teach this concept. In view of the foregoing, independent claim 1 is patentable over *Chia*. Therefore, reconsideration and withdrawal of the rejection under 35 U.S.C. §102(b) are in order, and a notice to that effect is earnestly solicited.

Independent network claim 9 is an apparatus claim associated with the implementation of independent method claim 1. Accordingly, independent claim 9 is patentable for the reasons discussed above with respect to *Bodin* and/or *Chia*.

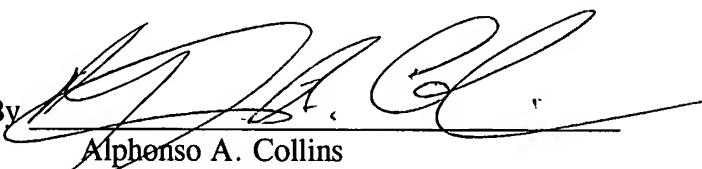
In view of the patentability of independent claim 1 and 9, for the reasons set forth above, dependent claims 2-7 and 10-16 are all patentable over the prior art.

Based on the foregoing amendments and remarks, this application is in condition for allowance. Early passage of this case to issue is respectfully requested.

It is believed that no fees or charges are required at this time in connection with the present application. However, if any fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,

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